

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
30 October 2003 (30.10.2003)

PCT

(10) International Publication Number  
WO 03/089412 A1

(51) International Patent Classification<sup>7</sup>: C07D 211/58,  
401/06, 409/06, 405/06, 417/14, 401/14, 413/06, 417/06,  
513/04, A61K 31/45, 31/4523, A61P 31/04

(21) International Application Number: PCT/GB03/01541

(22) International Filing Date: 9 April 2003 (09.04.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
0208579.3 13 April 2002 (13.04.2002) GB

(71) Applicant (for all designated States except US): **BRITISH BIOTECH PHARMACEUTICALS LTD** [GB/GB];  
Watlington Road, Oxford OX4 6LY (GB).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **AYSCOUGH, Andrew, Paul** [GB/GB]; British Biotech Pharmaceuticals Ltd, Watlington Road, Oxford OX4 6LY (GB). **KEAVEY, Kenneth** [IE/GB]; British Biotech Pharmaceuticals Ltd, Watlington Road, Oxford OX4 6LY (GB).

(74) Agent: **WALLS, Alan, J.**; c/o British Biotech Pharmaceuticals Ltd, Watlington Road, Oxford OX4 6LY (GB).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW.

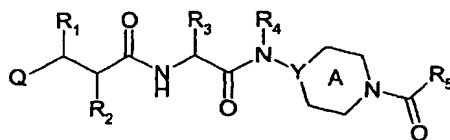
(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**Published:**

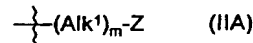
- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: ANTIBACTERIAL AGENTS



(II)



(IIA)

(57) **Abstract:** Compounds of formula (II) have antibacterial activity: wherein Q represents a radical of formula -N(OH)CH(=O) or formula -C(=O)NH(OH); R<sub>1</sub> represents hydrogen, methyl or trifluoromethyl, or, except when Z is a radical of formula -N(OH)CH(=O), a hydroxy, halo or amino group; R<sub>2</sub> represents a group R<sub>10</sub>-(V)<sub>n</sub>-(ALK)<sub>m</sub> wherein R<sub>10</sub> represents hydrogen, or an optionally substituted C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>2</sub>-C<sub>6</sub> alkenyl, C<sub>2</sub>-C<sub>6</sub> alkynyl, cycloalkyl, aryl, or heterocyclyl group, ALK represents a straight or branched divalent C<sub>1</sub>-C<sub>6</sub> alkylene, C<sub>2</sub>-C<sub>6</sub> alkenylene, or C<sub>2</sub>-C<sub>6</sub> alkynylene radical, and may be interrupted by one or more non-adjacent -NH-, -O- or -S- linkages, V represents -NH-, -O- or -S-, m and n are independently 0 or 1; R<sub>3</sub> represents the side chain of a natural or non-natural alpha amino acid; R<sub>4</sub> represents hydrogen or C<sub>1</sub>-C<sub>3</sub> alkyl; Y represents N or CH; ring A is optionally substituted on one or more ring carbon atoms by C<sub>1</sub>-C<sub>3</sub> alkyl, C<sub>1</sub>-C<sub>3</sub> alkoxy, or halo; and R<sub>5</sub> represents a group (IIA): wherein m is 0 or 1; Alk<sup>1</sup> represents a divalent C<sub>1</sub>-C<sub>3</sub> alkylene radical; Z represents hydrogen or an optionally substituted cycloalkyl, phenyl or heterocyclic group.